

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>P04757000</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/JP2004/003319</b>	International filing date (day/month/year) <b>12.03.2004</b>	Priority date (day/month/year) <b>14.03.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.</b>		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>4</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/003319

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-4, 6-15 as originally filed/furnished
- pages\* 5 received by this Authority on 14.01.2005
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. 2-4, 5-18 as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1, 5, 19 received by this Authority on 14.01.2005
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/3-3/3 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☒ the claims, nos. 8
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/003319

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-19	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-19	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
Document 1: JP 2003-31176 A (Yuichiro Sasaki), 31 January 2003			
Document 2: JP 2003-21670 A (Yuichiro Sasaki), 24 January 2003			
Document 3: JP 2001-91611 A (Hitachi, Ltd.), 6 April 2001			
Document 4: JP 2001-272336 A (Shimadzu Corporation), 5 October 2001			
Claims 1 to 19			
<p>The inventions set forth in claims 1 to 19 do not involve an inventive step in the light of documents 1 to 3 cited in the international search report and document 4 newly cited in this international preliminary examination report.</p>			
<p>Documents 1 and 2 set forth a beam current measuring device provided with magnetic shield portion and a SQUID as a magnetic sensor.</p>			
<p>It would be common general technical knowledge to a person skilled in the art that as the sensitivity of a detector is increased, i.e. when the signal level detected is made larger, the noise level also increases. In addition, document 4 pertains to an optical detector, but paragraph [0006] sets forth the general technical</p>			

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
-----------	---

issue that the sensitivity of a detector must be optimized not only according to the size of the measurement signal, but also in relation to the noise level.

Therefore, for the magnetic sensor set forth in documents 1 and 2, as an alternative to merely raising sensitivity in order that the size of the detection signal increases, it would be easy for a person skilled in the art to optimize the level of the detection level in relation to the noise level.

In addition, a person skilled in the art would be capable of specifying and optimizing the sensitivity of a magnetic sensor using a flux-regression current transformation coefficient or a value for magnetic flux sensitivity, which are directly related to the size of a detection signal, as necessary, and the grounds for a specified numerical range are inadequately supported by the opinion, as indicated in Box VIII, therefore this feature does not involve an inventive step.

Moreover, a high-temperature superconductor SQUID would be known to a person skilled in the art, as disclosed in document 3, and the use of a high-temperature superconductor SQUID does not constitute a special feature.

**Box No. VIII      Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. The numerical delimitations set forth in claim 1 include comparative examples 1 and 2 set forth in the description of this application, and the numerical delimitations set forth in claims 2 and 3 include comparative example 2. In addition, with regard to the numerical range set forth in claims 1 to 6, the specific grounds for delimiting the numerical range in this way, for any of the claims, is not fully supported by the description.

2. With regard to claim 19, when compared as an item to be treated, the differences which occur when production is carried out using a device provided with a beam current measurement device of this application as opposed to when production is carried out using a device provided with a different beam current measurement device, are not fully supported by the description.

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

(continuation of Box I.4)

With regard to claim 8, employing a high-temperature superconductor other than a high-temperature superconductor SQUID as a magnetic sensor exceeds the scope of disclosure at the time of filing of this application.